Inclusion of PACT Science & Social Studies in Grades 3-8 Ratings

Report & Simulations

PO Box 11867
Blatt Building, Rm 227
Columbia, SC 29211

www.sceoc.org

September 2004

Report on Inclusion of PACT Science and Social Studies Results in School Ratings and Simulations of Report Card Ratings for Schools Enrolling Students in Grades 3 – 8

Background Information

Elementary and middle school ratings have been based on PACT English language arts (ELA) and Math through 2004 and it is mandated by statute and by previous Education Oversight Committee (EOC) action that PACT Science and Social Studies be included in addition to ELA and Math in the ratings beginning in 2004-2005. PACT Science and Social Studies tests were first administered in Spring 2003. The Spring 2005 administration will mark the third administration of the PACT Science and Social Studies tests; under the accountability system, the results from newly developed standards-based tests are used for the school ratings beginning with the third test administration.

At all grade levels, PACT performance in ELA and Math in 2003 and 2004 was higher than in Science and Social Studies (see Figures 1-4 located at the end of this report), suggesting that the overall PACT scores for each school will be lower if Science or Social Studies are included along with ELA and Math. Figures 1-4 illustrate several trends in the PACT data:

- In all cases, ELA and Math scores are higher than Science and Social Studies scores;
- Scores tend to be higher in elementary schools than in middle schools, especially for ELA and Math and, to a lesser degree, in Science and Social Studies;
- There were increases in scores between 2003 and 2004, especially in elementary schools.

Keeping the differences in achievement levels on the different subject area tests in mind, simulations were conducted to reflect differing amounts of weight imparted to the Science and Social Studies tests compared to those for ELA and Math. The simulations are reported in this document along with the recommendations of an Elementary and Middle School Ratings Advisory Committee which considered the simulations at their meeting on September 23, 2004.

The tasks performed for this proposal were to simulate the inclusion of PACT Science and Social Studies results along with PACT ELA and Math results to calculate report card ratings based on various weightings of the tests. The simulation required several steps:

- Determine the cut scores for Below Basic 1 and Below Basic 2 for PACT Science and Social Studies;
- Match students' PACT Science and Social Studies score records with their ELA and Math score records;
- Assign the point weights corresponding to each test score for each student;
- Calculate simulated school ratings based on various combinations of weights assigned to each test (e. g., all four PACT tests weighted equally at 25% each; ELA and Math weighted 30% each and Science and Social Studies weighted 20% each; and ELA and Math weighted 40% each and Science and Social Studies weighted 10% each).

Simulations of Absolute Ratings

Below Basic 1 and Below Basic 2 Cut Scores

The score interval between the lowest possible test score and the Basic cut score is rather large and was divided into two portions for ELA and Math for the ratings system to reflect the fact that students scoring at the lowest levels below the Basic cut score (referred to as "Below Basic 1") need more extensive academic support to attain the Basic level of performance than students scoring closer to, but still below Basic ("Below Basic 2"). The Below Basic 1/Below Basic 2 cut scores for ELA and Math were set the magnitude of two standard errors of measurement (SEM) below the Basic cut scores for ELA and Math.

The same methodology was used to assign the Below Basic 1/Below Basic 2 cut scores for Science and Social Studies. The Below Basic 1/Below Basic 2 cut scores were established at the absolute value of two standard errors of measurement (conditional at the Basic cut score) below the Basic cut score. The scale score cut points for Science and Social Studies are listed in Table 1.

Table 1
PACT Science and Social Studies Cutoff Scale Scores

Grade	Science					Social Studies			
	Below Basic 2	Basic	Proficient	Advanced		Below Basic 2	Basic	Proficient	Advanced
3	283	297	313	326		283	296	314	326
4	384	397	412	424		382	394	413	425
5	482	497	514	524		482	495	515	525
6	584	598	613	624		582	595	614	625
7	686	697	714	724		682	695	716	725
8	785	797	815	825		785	795	815	825

Calculation of Simulated Absolute Ratings

Student test data used for calculating 2003 report card ratings were provided by the SC Department of Education (SDE) for use in calculating the absolute rating simulations; complete data for calculating the 2004 absolute ratings were not available in time for use in this simulation. The data provided by the SDE contained students' ELA and Math scores, but not their Science and Social Studies scores. EOC staff matched the Science and Social Studies test records with the ELA and Math data to provide complete data for the simulation. Approximately 97% of the student records were successfully matched. The numbers of student records at each grade level which were used for the absolute ratings simulations are listed in Table 2.

Table 2
Numbers of Student Records of 2003 PACT Data Used for Absolute Rating Simulations

Grade	Number of Student Records
3	48,591
4	50,499
5	51,582
6	52,853
7	49,362
8	51,494
Total	304,381

Absolute report card ratings for elementary and middle schools are based on the calculation of an index which represents the average PACT performance level of all students on all tests in the school. The absolute index is calculated by first converting each student's performance level on each test from the verbal label (e. g., "Advanced," "Proficient," "Basic," "Below Basic 2," "Below Basic 1") to a point weight ranging from 0 to 5, as listed in Table 3.

Table 3
Points Corresponding to PACT Performance Levels

PACT Performance Level	Points
Advanced	5
Proficient	4
Basic	3
Below Basic 2	2
Below Basic 1	1
Student not tested	0

Once each student's PACT performance level on each test is converted to a numeric point value, the points are averaged across all students, all grades, and all subjects to form an absolute index. The absolute index corresponds to the average PACT performance in the school. For example, an index of 3.0 indicates that the average PACT performance level of students on all the PACT tests administered in the school is Basic. Absolute ratings are assigned based on each school's absolute index. Since the data used for the simulation were from the Spring 2003 PACT test administration, the absolute index values in Table 4 were used to assign the simulated absolute ratings.

Table 4
2003 Index Values for Determining Absolute Ratings

Absolute Rating	Range of Indexes Corresponding to Absolute Rating
Excellent	3.4 and above
Good	3.0 – 3.3
Average	2.6 – 2.9
Below Average	2.2 – 2.5
Unsatisfactory	Below 2.2

Four simulations were calculated:

1. Ratings based on ELA and Math only, weighted 50% each, were calculated to provide a baseline based on the current absolute rating methodology which includes ELA and Math only;
2. Ratings based on all four PACT tests (ELA, Math, Science, and Social Studies) weighted equally, or 25% each (Equal);
3. Ratings based on different weightings for ELA and Math compared to Science and Social Studies, with ELA and Math weighted 30% each and Science and Social Studies weighted 20% each (60/40);
4. Ratings based on different weightings for ELA and Math compared to Science and Social Studies, with ELA and Math weighted 40% each and Science and Social Studies weighted 10% each (80/20).

The simulations were carried out separately for elementary schools (schools primarily containing grades 3-5) and middle schools (schools primarily containing grades 6-8) because ratings are reported separately for the two levels of school organization. Some schools receive more than one set of ratings if they house combinations of grades which include both school levels. For example, a school housing grades 4 through 7 would receive two sets of ratings, one based on performance in grades 4 and 5 (elementary), and one based on performance in grades 6 and 7 (middle school).

The results from the simulations are listed in Tables 5 (elementary schools) and 6 (middle schools).

Table 5
Simulations of 2003 Absolute Ratings – Elementary Schools
Number and Percentage of Schools At Each Absolute Rating Level

Absolute Rating	Baseline ELA & Math Only		Equal – 25% Each ELA, Math, Science, Social Studies		60/40 – 30% Each ELA & Math, 20% Each Science & Social Studies		80/20 – 40% Each ELA & Math, 10% Each Science & Social Studies	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Excellent	107	17.6%	66	10.9%	70	11.5%	87	14.3%
Good	236	38.8%	174	28.6%	192	31.6%	212	34.9%
Average	192	31.6%	224	36.8%	222	36.5%	217	35.7%
Below Average	69	11.4%	129	21.2%	113	18.6%	86	14.1%
Unsatisfactory	4	0.7%	15	2.5%	11	1.8%	6	1.0%
Totals	608	100%	608	100%	608	100%	608	100%

Note: Totals may not = 100% due to rounding.

Table 6
Simulations of 2003 Absolute Ratings – Middle Schools
Number and Percentage of Schools At Each Absolute Rating Level

Absolute Rating	Baseline ELA & Math Only		Equal – 25% Each ELA, Math, Science, Social Studies		60/40 – 30% Each ELA & Math, 20% Each Science & Social Studies		80/20 – 40% Each ELA & Math, 10% Each Science & Social Studies	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Excellent	13	4.7%	10	3.7%	11	4.0%	12	4.4%
Good	70	25.6%	54	19.7%	58	21.2%	65	23.7%
Average	95	34.7%	100	36.5%	101	36.9%	98	35.8%
Below Average	76	27.7%	79	28.8%	78	28.5%	76	27.7%
Unsatisfactory	20	7.3%	31	11.3%	26	9.5%	23	8.4%
Totals	274	100%	274	100%	274	100%	274	100%

Note: Totals may not = 100% due to rounding.

Simulations of Improvement Ratings

Background

PACT Science and Social Studies were first administered in 2003, with the second administration in Spring 2004. The improvement ratings are based on the average progress in achievement of individual students in the school over one school year, and the improvement index calculations require matched student longitudinal test data. Report card data for 2004 were not available from the SDE for use in the simulations, so the improvement rating simulations are based on 2003 and 2004 data matched specifically for purposes of the simulation. Individual students' 2003 PACT scores were matched to their 2004 PACT scores to form a complete record for each student containing 2003 ELA, Math, Science, and Social Studies scores and 2004 ELA, Math, Science, and Social Studies scores. Only student records containing complete test data for both years were used for the simulation. Additional information needed to select the student records used in the improvement index calculation such as student attendance in the school by the 45th day of attendance were not available for 2004, so the simulated improvement ratings may differ from the actual ratings calculated on more complete data. However, the test score information needed was available for the simulation and it is expected that trends evident from the simulations will mirror those obtained from the actual results when complete data are available.

Once the 2003 and 2004 PACT data were matched, the simulation of the improvement ratings involved completing a set of steps similar to those followed to simulate the absolute ratings. These steps are:

- Determine the improvement rating point weights corresponding to the scale score intervals between performance levels for PACT Science and Social Studies;
- Assign the point weights corresponding to each test score for each student;
- Calculate simulated school ratings based on various combinations of weights assigned to each test (e. g., all four PACT tests weighted equally at 25% each; ELA and Math weighted 30% each and Science and Social Studies weighted 20% each; and ELA and Math weighted 40% each and Science and Social Studies weighted 10% each).

Determination of Cut Scores for Improvement Ratings

The improvement rating index is based on the differences in average PACT achievement between the pretest and posttest years. The point weights assigned to PACT scale scores for the improvement index differ somewhat from those used for the absolute rating index. As adopted by the EOC in 2003, the score intervals between PACT performance levels (for example, between Basic and Proficient) are divided into four smaller intervals in order to provide better sensitivity in the rating system to small gains (or losses) in improvement. Different point weights are assigned for each of the four score divisions within each performance interval. Improvement rating point weights for PACT Science and Social Studies were developed for the simulation and are listed in Tables 7 and 8.

Table 7
Science
Conversion of Scale Scores To Point Weights
For Calculating Improvement Rating

Grade / Point Weight	Below Basic 1				Below Basic 2				Basic				Proficient				Advanced
	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
8	747 or less	748	760	773	785	788	791	794	797	801	806	811	815	817	820	822	825 or more
7	647 or less	648	661	674	686	688	691	694	697	701	706	710	714	716	719	721	724 or more
6	547 or less	548	560	572	584	587	591	593	598	601	605	609	613	615	618	621	624 or more
5	447 or less	448	459	471	482	485	489	493	497	501	506	510	514	516	519	521	524 or more
4	347 or less	348	360	372	384	387	391	394	397	400	404	408	412	415	418	421	424 or more
3	247 or less	248	260	272	283	286	290	293	297	301	305	309	313	316	320	323	326 or more

Table 8
Social Studies
Conversion of Scale Scores To Point Weights
For Calculating Improvement Rating

Grade / Point Weight	Below Basic 1				Below Basic 2				Basic				Proficient				Advanced
	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
8	747 or less	748	760	773	785	787	790	793	795	800	805	810	815	817	820	822	825 or more
7	647 or less	648	659	671	682	685	689	692	695	700	706	711	716	718	721	723	725 or more
6	547 or less	548	559	571	582	585	589	592	595	599	604	609	614	616	619	622	625 or more
5	447 or less	448	459	471	482	485	489	492	495	500	505	510	515	517	520	522	525 or more
4	347 or less	348	359	371	382	385	388	391	394	398	403	408	413	416	419	422	425 or more
3	248 or less	249	260	272	283	286	290	293	296	300	305	309	314	317	320	323	326 or more

Calculation of Simulated Improvement Ratings

Like absolute ratings, improvement ratings are based on a calculated numerical index. To calculate the improvement index, the appropriate point weights are assigned to each student's pretest and posttest scores. The average pretest and posttest scores on all tests for all students in a school are then calculated and the average pretest score is subtracted from the average posttest score. The difference between the average pretest score and the average posttest score is the improvement index for the school. The improvement index is then rounded to the nearest one-tenth of a point. If, on average, students in the school achieved higher scores on the posttest than on the pretest, the improvement index will be a positive number greater than zero and provides evidence that individual students in the school improved their achievement levels over the school year. If the improvement index is less than zero (a negative number), the students in the school, on average, have not made achievement gains. If the improvement index is zero, the students in the school have, on average, maintained their achievement levels, neither gaining nor losing. The improvement ratings are based on the magnitude and sign of the improvement index according to the criteria listed in Table 9.

Table 9
Improvement Rating Criteria

Improvement Rating	Improvement Index
Excellent	0.4 or greater
Good	0.3
Average	0.1-0.2
Below Average	0.0
Unsatisfactory	-0.1 or less

The simulation of the improvement ratings was based on the 2003 and 2004 PACT data longitudinally matched expressly for this purpose. The grade level data matched for the simulation are listed in Table 10.

Table 10
Longitudinally Matched Data for Improvement Simulation

Posttest (2004) Grade	Grade level repeater status	Number of Matched Student Records
3	Repeaters only	1,036
4	Repeaters & Non-repeaters	46,120
5	Repeaters & Non-repeaters	48,327
6	Repeaters & Non-repeaters	49,251
7	Repeaters & Non-repeaters	49,400
8	Repeaters & Non-repeaters	45,490
Total	Repeaters & Non-repeaters	239,624

The point weights were assigned to each student's pretest and posttest ELA, Math, Science, and Social Studies scores, the improvement indexes were calculated for each school, and the improvement ratings were determined based on the criteria in Table 9 above. The results for elementary schools are listed in Table 11, and the results for middle schools are listed in Table 12.

Table 11
Simulations of 2004 Improvement Ratings – Elementary Schools
Number and Percentage of Schools At Each Improvement Rating Level

Improvement Rating	Equal – 25% Each ELA, Math, Science, Social Studies		60/40 – 30% Each ELA & Math, 20% Each Science & Social Studies		80/20 – 40% Each ELA & Math, 10% Each Science & Social Studies	
	No.	Percent	No.	Percent	No.	Percent
Excellent	17	2.8%	18	3.0%	18	3.0%
Good	12	2.0%	7	1.2%	3	0.5%
Average	252	41.7%	218	36.1%	153	25.3%
Below Average	208	34.4%	227	37.6%	239	39.6%
Unsatisfactory	115	19.0%	134	22.2%	191	31.6%
Totals	604	100%	604	100%	604	100%

Note: Totals may not = 100% due to rounding.

Table 12
Simulations of 2004 Improvement Ratings – Middle Schools
Number and Percentage of Schools At Each Improvement Rating Level

Improvement Rating	Equal – 25% Each ELA, Math, Science, Social Studies		60/40 – 30% Each ELA & Math, 20% Each Science & Social Studies		80/20 – 40% Each ELA & Math, 10% Each Science & Social Studies	
	No.	Percent	No.	Percent	No.	Percent
Excellent	1	0.4%	1	0.4%	1	0.4%
Good	1	0.4%	1	0.4%	1	0.4%
Average	123	45.2%	106	39.0%	92	33.8%
Below Average	114	41.9%	127	46.7%	127	46.7%
Unsatisfactory	33	12.1%	37	13.6%	51	18.8%
Totals	272	100%	272	100%	272	100%

Note: Totals may not = 100% due to rounding.

Discussion

The simulations of the school ratings resulted in the following findings:

- Absolute Ratings:
  - ✓ The inclusion of Science and Social Studies scores in addition to ELA and Math scores results in lower absolute ratings for both elementary and middle schools;
  - ✓ Reducing the contribution of Science and Social Studies scores and increasing the contribution of ELA and Math scores results in higher absolute ratings;
  - ✓ Reducing the contribution of ELA and Math scores and increasing the contribution of Science and Social Studies scores results in lower absolute ratings.
- Improvement Ratings
  - ✓ The inclusion of Science and Social Studies scores in addition to ELA and Math scores seems to have an opposite effect on the improvement ratings compared to the absolute ratings:
    - Reducing the contribution of Science and Social Studies scores and increasing the contribution of ELA and Math scores results in lower improvement ratings;
    - Reducing the contribution of ELA and Math scores and increasing the contribution of Science and Social Studies scores results in higher improvement ratings.

In general, the effects described above are more pronounced for elementary than for middle schools. These findings reflect the PACT test results for 2003. In general, PACT ELA and Math results are higher than the Science and Social Studies results for both elementary and middle schools, although the difference is more pronounced for elementary schools than for middle schools. The addition of the lower Science and Social Studies scores to the relatively higher ELA and Math scores tends to decrease the average overall achievement in a school, resulting in a lower absolute rating. The magnitude of the decrease in average achievement reflects the relative contributions of the ELA, Math, Science, and Social Studies tests, with simulations in which the weights for Science and Social Studies are highest (25% each) resulting in the lowest absolute ratings. The lowest weights for Science and Social Studies (10% each) were associated with relatively higher absolute ratings.

The effects of the weightings are reversed for the improvement ratings: the higher the weighting of Science and Social Studies compared to ELA and Math, the higher the improvement ratings. This reflects the fact that improvements were relatively larger between 2003 and 2004 for Science and Social Studies than for ELA and Math. The effect is somewhat more evident for elementary than for middle schools, reflecting the relatively larger gains in Science and Social Studies observed in elementary schools.

Recommendations from Elementary and Middle School Ratings Advisory Committee

The simulation results were shared with an advisory committee composed of educators and other experts in science and social studies education (see the listing of committee members in Appendix A). The advisory committee met in Columbia on September 23, 2004 to discuss the issues related to including Science and Social Studies test results in the school rating system and to make recommendations regarding the methodology to be used (see meeting agenda in Appendix B). The advisory committee membership included teachers, principals, district content area supervisors and other content experts, district testing directors, district superintendents, and SDE representatives from the Offices of Assessment, Research, and Curriculum and Standards.

The committee membership represented a diversity of viewpoints regarding the issues, which led to dynamic discussion at the meeting. One area of general agreement, however, was that this is an extremely important decision and deserves careful consideration. Among the issues and (sometimes contradictory) concerns expressed by committee members over the course of the discussion were:

- It is vital that our children learn Science and Social Studies knowledge and skills because success in these subject areas demands the development of skills in applying knowledge and solving problems along with the acquisition of knowledge needed to become well-rounded, productive, and successful adults who can fully participate in the economic, social, and political life of our country;
- The relatively lower PACT achievement in Science and Social Studies compared to ELA and Math will, when included with ELA and Math, result in lower school ratings, leading to discouragement on the part of educators and confusion for parents;
- The lower initial achievement levels observed in Science and Social Studies compared to ELA and Math provide opportunities for rapid growth which can be validating for teachers when that growth results in higher improvement ratings;

- The time and resources currently devoted to instruction in Science and Social Studies are insufficient, especially at the elementary school level, where as much as four hours of the six hour school day may currently be devoted to ELA and Math instruction;
- If Science and Social Studies are not adequately represented in the school ratings those subject areas will continue to receive inadequate attention and resources, since what is tested will be taught, and what is not tested will not be taught;
- BSAP Science was tested for many years but little growth in achievement was observed because there were no incentives to improve – including Science and Social Studies in the school ratings system will provide an incentive for improved instruction in these subjects;
- The relative emphasis on Science and Social Studies instruction compared to ELA and Math is different at the elementary than at middle school levels, with more emphasis placed on ELA and Math in the elementary schools compared to middle schools because teaching the basic skills in ELA and Math are perceived by elementary teachers and principals as representing the primary goals for elementary schools, and the rating system should reflect those differences in emphasis;
- There is not adequate time in the school day to increase the time devoted to Science and Social Studies without sacrificing time for ELA and Math instruction, which might lower achievement in those areas;
- Successful efforts are currently being made in some schools to integrate the instruction of the Science and Social Studies content areas with ELA and Math to make more effective use of the time available, but these efforts are not widely adopted and teachers need professional development in how to implement them.

The advisory committee debated the issues for four hours before arriving at a consensus in support of the following four recommendations, although not all members fully concurred with all the recommendations. The arguments generated by the committee in favor of and those not in favor of each recommendation are also listed.

Recommendation 1:

Phase the inclusion of PACT Science and Social Studies into the school absolute ratings over a three year period beginning in 2004-2005, increasing the weights for Science and Social Studies each year (5 percentage points per year suggested) until the target weightings are achieved.

Arguments for Recommendation 1:

- Schools need more time to adjust instruction and schedules to effectively teach Science and Social Studies;
- Phase-in will result in lower initial negative impact on the absolute ratings, which may be more encouraging to teachers

Arguments against Recommendation 1:

- Science and Social Studies results should be included at their full target weights beginning in 2004-2005 and should not be phased in because Science and Social Studies curriculum standards will have been available for at least four years and PACT tests in those areas will have been administered three times by

the time the ratings including Science and Social Studies in the ratings are scheduled to begin in 2005, giving sufficient time for schools to adjust;
- Phase-in will send confusing messages about the importance of Science and Social Studies to parents and teachers.

Recommendation 2:

When fully phased in, the target absolute rating weights for PACT Science and Social Studies in elementary schools should be set at 20% each, with 30% each for ELA and Math.

Arguments for Recommendation 2:
- Given the perceived primary mission of elementary schools to emphasize the basic skills of ELA and Math, Science and Social Studies should not be weighted equally as ELA and Math;
- Weighting Science and Social Studies 20% each shows that they are important, and represents a considerable increase in the attention which will be paid to these content areas compared to current practices.

Arguments against Recommendation 2:
- Science and Social Studies should be weighted less in elementary schools because weighting Science and Social Studies 20% each confers too high a weight to those content areas when ELA and Math represent the most important areas for learning at the elementary grades;
- The development of ELA and Math skills is vital to later understanding and proficiency in Science and Social Studies and should receive the highest emphasis at the elementary grades.

Recommendation 3:

The committee was evenly divided on the target weighting for middle schools: half recommended that the target weights should be 20% each for Science and Social Studies, with targets of 30% each for ELA and Math, and half recommended that the target weights be set at 25% for each test. The committee did not reach consensus on this recommendation.

Arguments for equal weights (25% each) for Science, Social Studies, ELA, and Math:
- Ensures an equal emphasis on instruction in each area, which will result in better prepared students with higher achievement in all areas;
- Equal weighting applied to the improvement rating will result in higher improvement ratings, which will encourage educators and parents;
- Weightings for Science and Social Studies at the middle school level should be higher than at the elementary level because Science and Social Studies provide opportunities for students to apply the basic skills learned at the elementary level, and application and problem solving skills as well as the content knowledge in these subject areas are necessary for students to develop if they are to be successful in later educational and work experiences.

Arguments against equal weights (25% each) for Science, Social Studies, ELA, and Math:

- Initial absolute ratings will be lower than if lower weights for Science and Social Studies are chosen;
- Less time may be available for teaching ELA and Math because more time may be devoted to Science and Social Studies instruction, but more emphasis on ELA and Math instruction is needed because achievement in these areas at the middle school level are lower than desired by parents;
- Weightings will be higher than those for elementary schools, which is not fair to middle schools – using the same system for both elementary and middle schools will be less complicated.

Arguments for 30% ELA, 30% Math, 20% Science, and 20% Social Studies weights:

- Represents an acceptable compromise weighting level;
- Is at the same weighting as elementary schools, so is perceived as fairer to middle schools;
- Will have a lower negative impact on initial absolute ratings than equal weighting, which will be more encouraging to educators;
- Provides a closer match to middle school principal's beliefs about the relative importance of the subject areas;
- Weights for Science and Social Studies are large enough to reinforce the importance of those subjects and will force changes such as integration of instruction to ensure more resources are available for Science and Social Studies instruction which can raise achievement levels in those areas.

Argument against 30% ELA, 30% Math, 20% Science, and 20% Social Studies weights:

- Science and Social Studies will be perceived as less important than ELA and Math and will receive fewer resources, making it more difficult to increase achievement levels in the important subject areas of Science and Social Studies.

Recommendation 4:

The weights for the improvement rating should not be phased in over time like those for the absolute ratings, but should be initially set at the target weights for each school level (e. g., 20% each for Science and Social Studies and 30% each for ELA and Math in elementary schools; and 25% each Science and Social Studies, 25% each for ELA and Math in middle schools).

Argument for starting with equal weightings when calculating the improvement ratings:

- Higher weights for Science and Social Studies are associated with higher improvement ratings, which will be encouraging for teachers and parents.

Arguments for not starting with equal weightings when calculating the improvement ratings:

- Using different weighing methods for the absolute and improvement ratings is too complex and will be confusing to parents and educators;
- Higher gains for Science and Social Studies than for ELA and Math may not be sustained every year – higher weights for Science and Social Studies will result in lower improvement ratings if Science and Social Studies do not sufficiently improve.

Figure 1: Elementary and Middle School PACT ELA Performance Levels

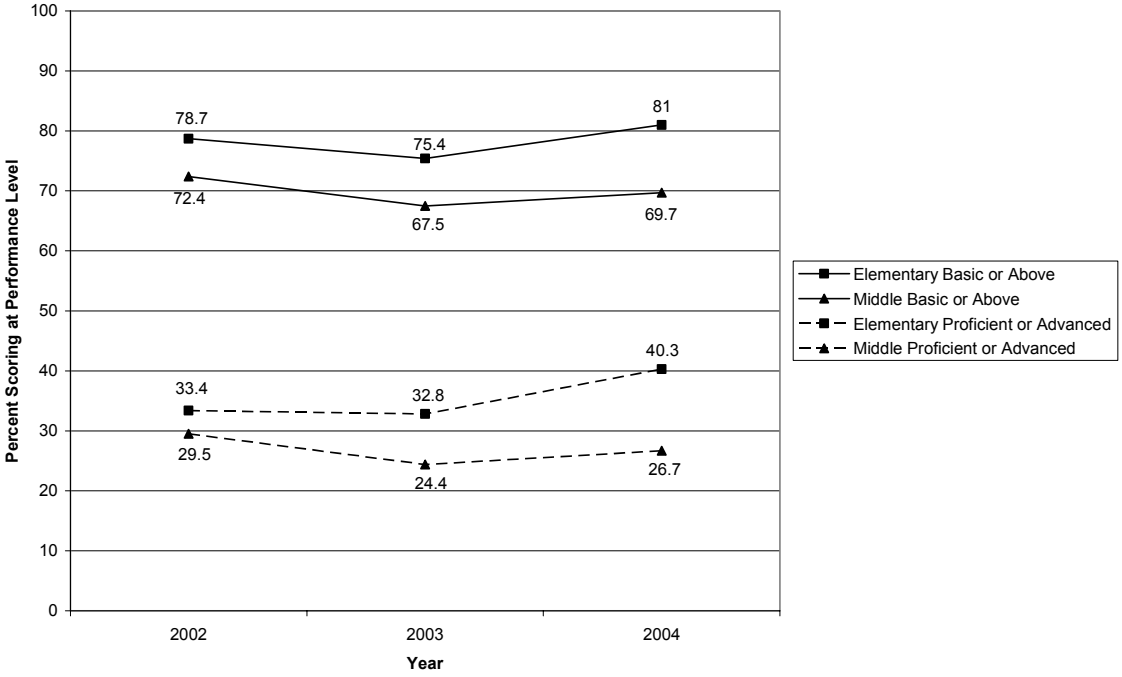


Figure 2: Elementary and Middle School PACT Math Performance Levels

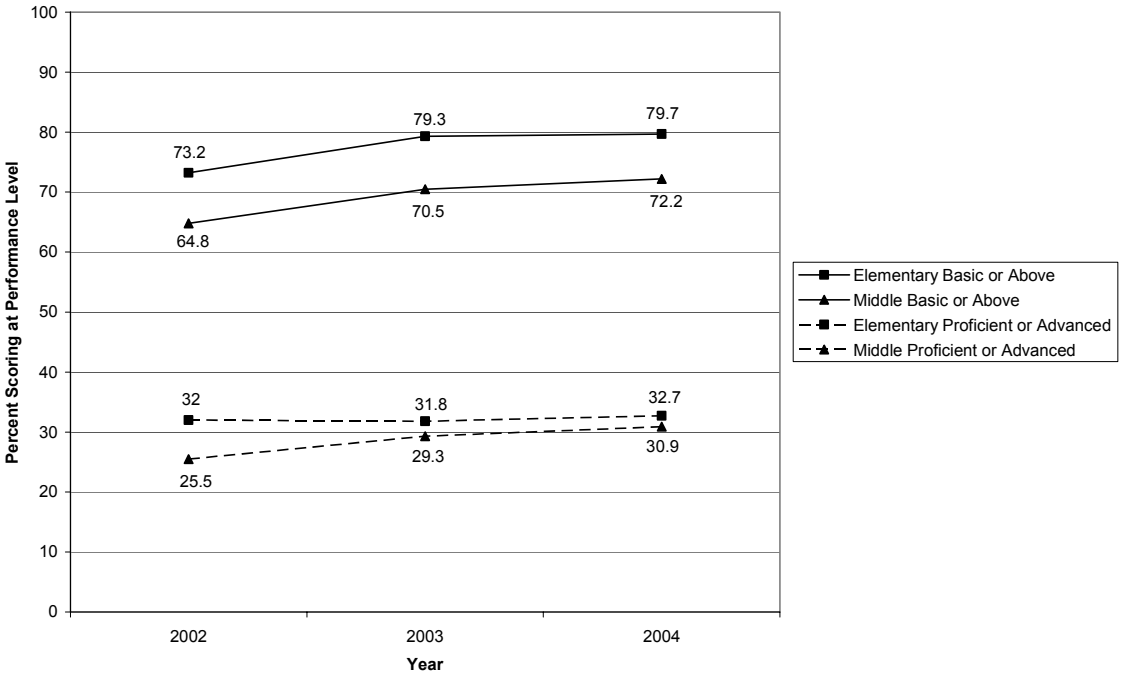


Figure 3: Elementary and Middle School PACT Science Performance Levels

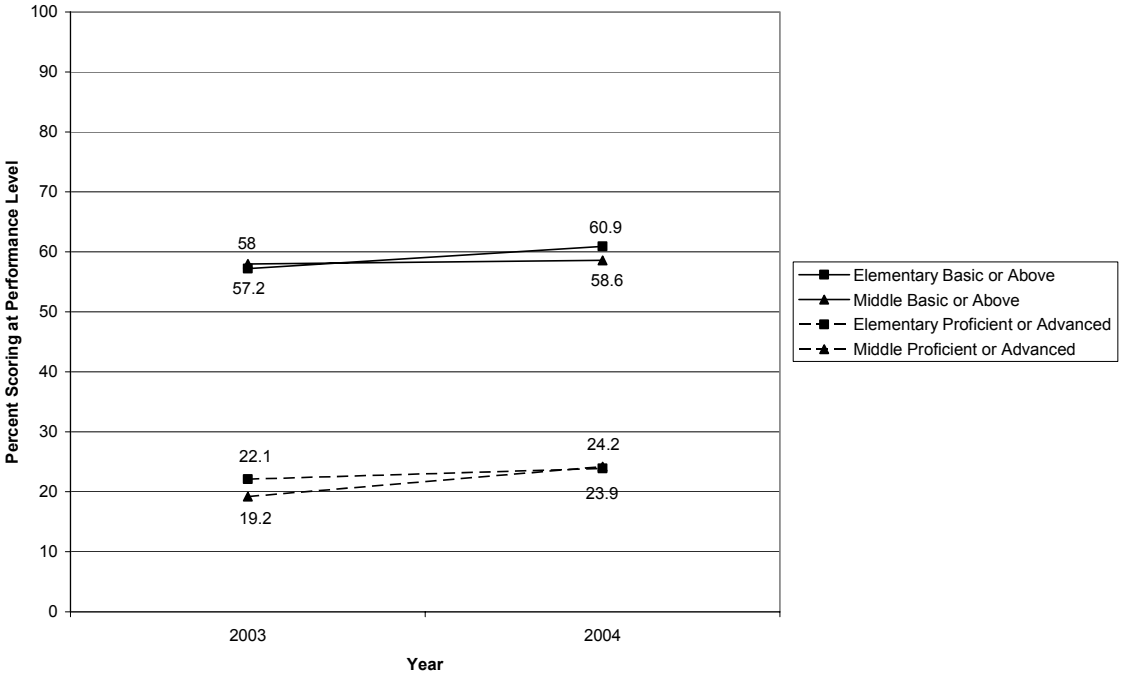
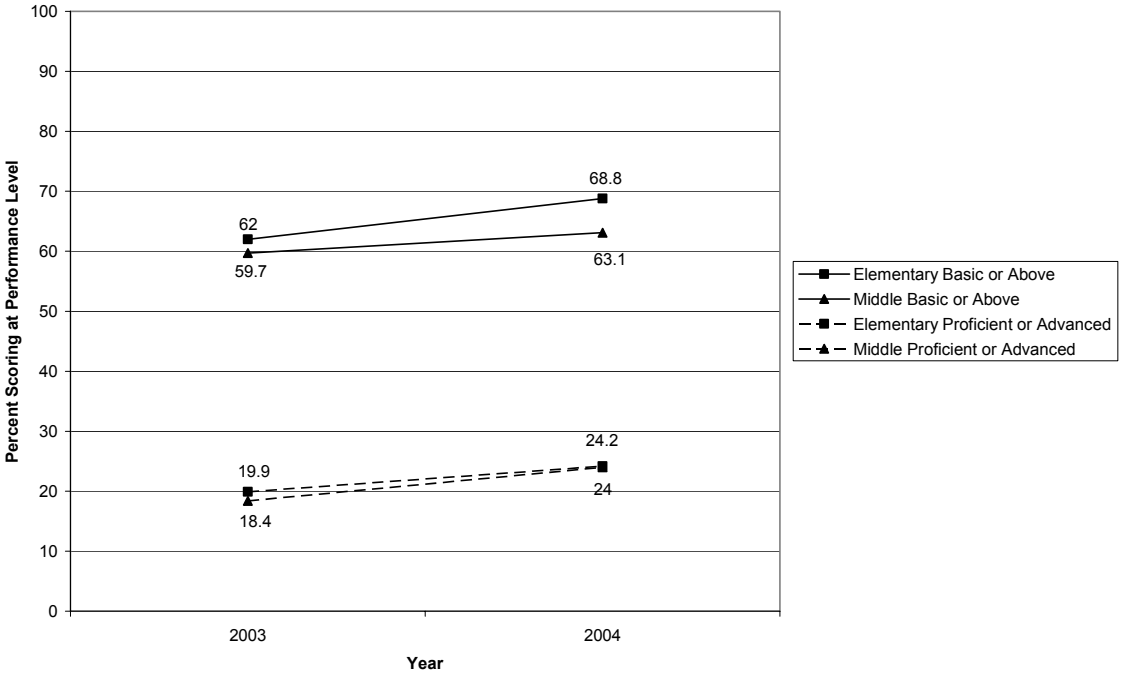


Figure 4: Elementary and Middle School PACT Social Studies Performance Levels



APPENDIX A

Elementary and Middle School Ratings Advisory Committee

Elementary and Middle School Ratings Advisory Committee Members:

Ms. Sherry Barnhill, Hannah-Pamplico Middle School
Mr. Donald Barnette, Principal, Boiling Springs Junior High
Ms. Tami Broomall, North Vista Elementary School
Ms. Cindy Coker, SC Bar Association
Dr. Wayne Fowler, Superintendent of Schools, Anderson County School District One
Dr. Jennifer Gouvin, Director of Research, Richland County School District Two
*Dr. Bob Green, Clemson University
Dr. William Gummerson, Superintendent of Schools, Lexington County School District Three
Dr. Valerie Harrison, Assistant Superintendent for Instruction, Florence County School District One
Mr. Gene Huiett, Principal, Merriwether Elementary
Ms. Helen Jones, Burton-Pack Elementary
Ms. June Lominack, Principal, Dutch Fork Elementary
Mr. Tom Pritchard, Director of Research, Horry County School District
Ms. Jane Satterfield, Social Studies Consultant
Dr. Lynn Talton, Science Consultant, Greenville County School District

Representatives from SC Department of Education
Mr. James Bryan, Office of Curriculum and Standards
Dr. Jim Casteel, Office of Assessment
Dr. Necati Engec, Office of Assessment
Mr. John Holton, Office of Curriculum and Standards
Ms. Bunny Mack, Office of Research

**Unable to attend due to illness*

APPENDIX B

AGENDA

Elementary and Middle School Ratings Advisory Committee

September 23, 2004

The State of South Carolina
EDUCATION OVERSIGHT COMMITTEE

P. O. Box 11867
Room 227 · Blatt Building
Columbia, South Carolina 29211
(803) 734-6148
Fax (803) 734-6167

Elementary/Middle School Ratings Advisory Committee

AGENDA

Room 221 Blatt Building
September 23, 2004
10:00 a.m.

I.	Welcome & Introduction	Jo Anne Anderson
II.	Background Information	David Potter
III.	Activity: Curriculum, Instruction & Resources	Committee Members
IV.	Simulations of Data	David Potter
V.	Discussion	Committee Members
VI.	Adjournment	

Elementary/Middle School Ratings Advisory Committee Members:
Dr. William Gummerson, Superintendent of Schools, Lexington County School District Three
Dr. Wayne Fowler, Superintendent of Schools, Anderson County School District One
Dr. Valerie Harrison, Assistant Superintendent for Instruction, Florence County School District One
Mr. Tom Pritchard, Director of Research, Horry County School District
Ms. Cindy Coker, SC Bar Association
Dr. Jennifer Gouvin, Director of Research, Richland County School District Two
Ms. June Lominack, Principal, Dutch Fork Elementary
Ms. Helen Jones, Burton-Pack Elementary
Dr. Lynn Talton, Science Consultant, Greenville County School District
Mr. Gene Huiett, Principal, Merriwether Elementary
Ms. Sherry Barnhill, Hannah-Pamplico Middle School
Ms. Tami Broomall, North Vista Elementary School
Dr. Bob Green, Clemson University
Ms. Jane Satterfield, Social Studies Consultant
Mr. Donald Barnette, Principal, Boiling Springs Junior High

Representatives from SDE
Mr. James Bryan
Mr. John Holton
Mr. Jim Casteel
Mr. Necati Engec
Ms. Bunny Mack

EOC Staff
David Potter
Jo Anne Anderson